The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of
The National Geographic Society
WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific Society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXX November 5, 1951 NUMBER 6

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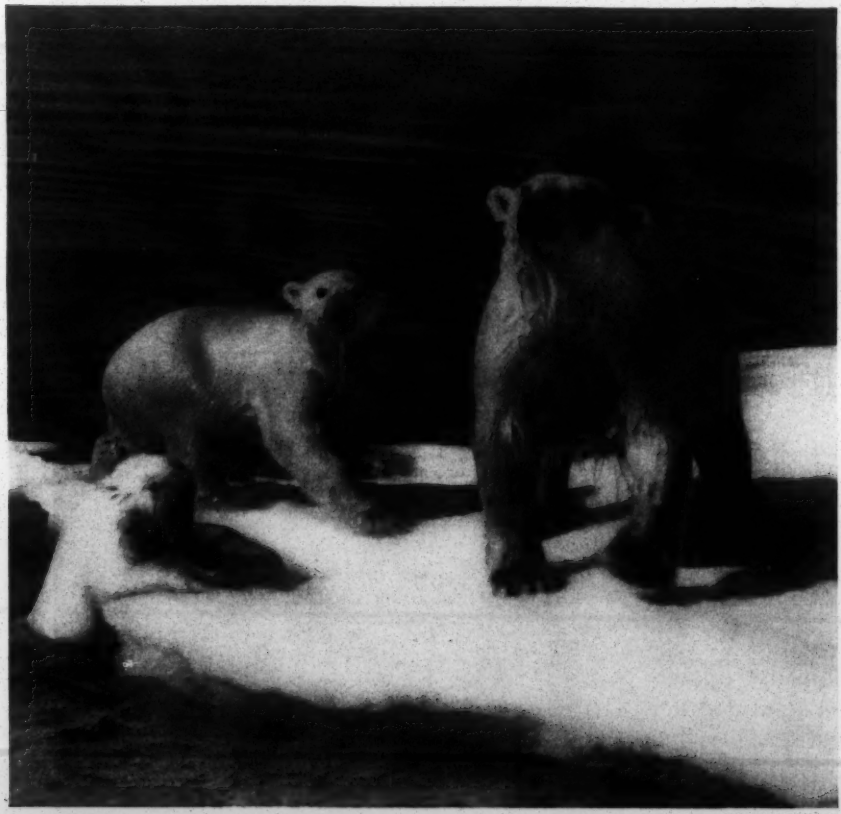

DONALD MAC MILLAN

A MOTHER POLAR BEAR DEFENDS HER GRACEFUL YOUNG NEAR GREENLAND'S "MATERNITY WARD" FOR ICEBERGS (Bulletin No. 1)

Bulletin No. 1, November 5, 1951

Greenland's Icebergs Dwindle as Ship Menace

GREENLAND'S largest export, icebergs, hit a new low this year. Of an output estimated at 10,000 to 15,000 bergs, not one succeeded in reaching the crowded shipping lanes between North America and Europe where in past years the floating menaces were feared by every captain.

The largest Arctic icebergs take off from the continually advancing glaciers and icecap fringe of Greenland's west coasts. As glacier ends push into the sea, they crack with an explosive noise and drop into the water. In an average year about 400 of the total production survive an 1,800-mile southward drift before disintegrating in the warm Gulf Stream. This year no icebergs were reported below the 46th parallel along the southern tip of Newfoundland.

Antarctic Also Has Icebergs

Moving south through Baffin Bay and Davis Strait to Labrador, many of the crystal "castles" and plain "flattops" jam against the coast or are trapped by islands or bays. A few swing into the Labrador current and continue southward (illustration, next page). Some drift toward Belle Isle Strait and others move around Newfoundland by way of the Grand Banks to invade main traffic arteries and threaten shipping.

Major Arctic icebergs are produced by about 18 "name" glaciers. The Humboldt, near Thule, north of Cape York, is one that supplies outsize models. There, in the realm of the polar bear (illustration, cover), mountains of ice a mile across and rising 200 feet above water have been reported. The largest Arctic bergs are small compared to the 20-mile-long bergs sighted by Australian air reconnaissance in the Antarctic in 1948. Antarctic ice is of less concern to the world because little shipping is carried on in the region.

Although icebergs occur throughout the year, the greatest concentration usually reaches the shipping lanes from March through June. The season occasionally extends from February through August.

Tragedy Brings Ice Patrol

Greatest danger zone for steamships is around latitude 42 degrees 45 minutes north and longitude 47 degrees 52 minutes west, slightly southeast of the southern tip of the Grand Banks. This was the approximate locale of the *Titanic* disaster of 1912, when the ship rammed an iceberg's invisible underwater shelf. The toll of lives in this north Atlantic disaster was 1,517. The *Titanic* was the world's largest ship and it was on its maiden voyage from Liverpool to New York.

Since the *Titanic* tragedy the United States Coast Guard's International Ice Patrol has located icebergs and warned ships in or approaching the danger zone. The patrol is maintained by a dozen countries. Among the tools now used to track down bergs are radar and loran.

The United States Hydrographic Office also issues pilot charts of

ENTERED AS SECOND CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
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AMOS BURG

JUNEAU, A FAR-NORTH CAPITAL, ADMINISTERS ONE OF THE LARGEST REAL ESTATE PURCHASES IN HISTORY—ALASKA

The United States bought the territory for about two cents an acre (Bulletin No. 5). Here a fishing fleet and gold mine at the approaches to Juneau (middle distance) symbolize the immense return on the 1867 investment.

Bulletin No. 2, November 5, 1951

Sultan Crowned in Borneo's Oil-Rich Brunei

AMID ECHOES of war and revolt coming from the neighboring Asia mainland, the sumptuous 1951 coronation of Borneo's new Sultan of Brunei struck a different note. Peace and prosperity showed through the traditional crowning ceremonies which were complete with the familiar and flamboyant Oriental procession of monarch's gilded litter, scarlet-clad flagsmen, spearmen, sword carriers, and bearers of the symbolic umbrella and the royal betel nut.

The atmosphere of prosperity also came from the country's rich oil fields whose increasing production has made British-protected Brunei the leading petroleum source within the British Commonwealth.

Once Was Power in East

The latest Sultan of Brunei, successor to an older brother, is carrying on a dynasty which was established in northern Borneo some 500 years ago. Within his lifetime the discovery and development of oil resources have brought about one of the most dramatic changes ever to occur in a land noted for fabulous ups and downs.

Once Brunei sultans ruled over most of the giant tropical island of Borneo. During their heyday in the early 16th century, Brunei's war canoes ranged the surrounding seas, spreading terror from Java to the Philippines, and even capturing Manila.

When Magellan's traveling historian, Pigafetta, visited the flourishing capital city of Brunei in 1521, he found it a center of wealth and vitality, culture and luxury.

Then gradually Brunei's power and holdings shrank. By the beginning of the 19th century, piracy was rampant in the adjacent seas. The then small town of Brunei was important chiefly as a slave mart for disposal of the victims of the illicit traffic.

Today, Brunei is the smallest of the three British-controlled territories of northern Borneo. Reduced to two tiny coastal patches surrounded by Sarawak and near North Borneo, it covers about 2,225 square miles, an area little more than that of Delaware.

Oil Discovered in 1929

Brunei's annual income, however, is now reported to have reached the $10,000,000 mark. This represents a huge sum of money in so small an Asiatic state.

It was only in 1929 that the first commercially valuable oil fields were discovered at the little port of Seria. The find transformed Brunei from a primitive nation of fishermen, simple artisans, and small farmers scratching a meager living from jungle soil, to one of prosperous and bustling industry.

More than three-quarters of Brunei's labor population—a mixture of Malays, Chinese, and native tribesmen such as Dyaks (illustration, next page), Kedayans, and Belaits—have gone to work in one way or another for the oil business.

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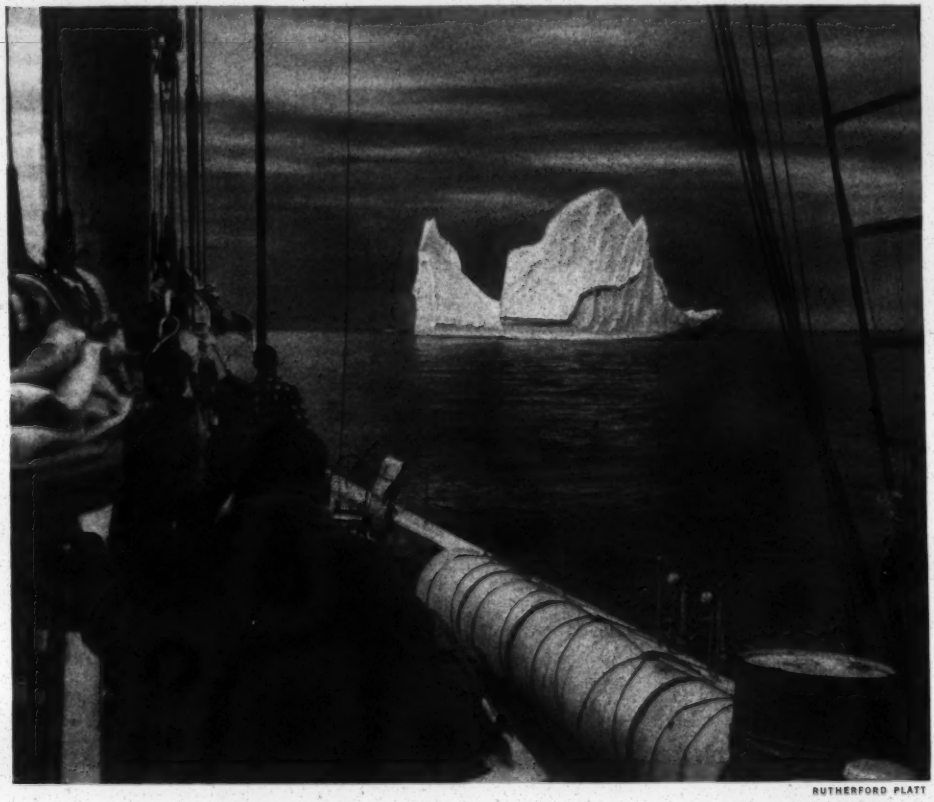
the region, laying down safe courses for ships. No ships have been lost by iceberg collision in regular shipping lanes since the patrol began.

Scientists studying change in climate see that as a reason for fewer and fewer icebergs. The world apparently is getting warmer. Polar icecaps are disappearing at an estimated rate of about 500 feet a year. Many North American glaciers have vanished completely. In the last 100 years temperatures in Massachusetts have increased three degrees, a study shows. The trend also is seen in fewer subzero days and longer growing seasons in various temperate zone areas.

NOTE: Greenland is shown on the National Geographic Society's map of Canada, Alaska & Greenland. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For further information, see "Far North with 'Captain Mac'," in the *National Geographic Magazine* for October, 1951; "Milestones in My Arctic Journeys," October, 1949; "Americans Stand Guard in Greenland," October, 1946; "Servicing Arctic Air Bases," May, 1946; "Greenland Turns to America," September, 1942; "Desolate Greenland, Now an American Outpost," September, 1941; and "Greenland from 1898 to Now," July, 1940. *(Back issues of the Magazine may be obtained from the Society's headquarters at 60¢ a copy, 1946 to the present date; $1.00 from 1930 through 1945; and $2.00 from 1912 through 1929. Earlier issues, when available, at varied prices.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, April 23, 1951, "Defense Talks Center on Icy Greenland"; and "Bluie West-One Has Greenland's First Hotel," May 8, 1950.



RUTHERFORD PLATT

SAILORS APPROACH ICEBERGS WARILY, KNOWING THAT SEVEN-EIGHTHS OF THEIR BULK IS SUBMERGED

Bulletin No. 3, November 5, 1951

Strasbourg Is Host to Council of Europe

WHEN Strasbourg, France's retrieved Rhineland city, is host to the Council of Europe this month, United States Congressmen will be present. They have been invited to meet for a discussion of the problems facing the young organization.

Under a statute signed in London in May, 1949, the Council of Europe came into being. Its purpose is to unify the free nations of Europe so that they may effectively bring order out of Europe's postwar chaos and prevent another world war.

Inherited Independent Character

Strasbourg, ancient Alsatian city on France's German border, is particularly suitable as a meeting place. With more than 1,000 years of history as a river port and crossroads of Europe, it has a broad historic background which ties it in with many empires and peoples.

A child of both France and Germany, with characteristics of each, Strasbourg is almost an international city. Its distinctive individuality is a legacy from its days as a Free City during the Middle Ages.

Strasbourg began as a Celtic settlement on a small island formed by the branches of the River Ill, a tributary of the near-by Rhine. Druids held their ceremonies under the oaks of its ancient forests. About 15 B.C. the Romans came. They fortified the site and called it Argentoratum. It became headquarters for the 8th Roman Legion. Roman roads joined the waterways to make Strasbourg an important center of communications.

After the fall of Rome the Franks took over and, under Charlemagne, it was part of the Holy Germanic Roman Empire, described by Voltaire as not holy, not Germanic, not Roman, and not even an empire. Its loose control permitted the city a working freedom and great cultural growth. The Franks gave it its present name, which means "town on the roads."

Hemmed in by Mountain and Forest

A key position at the crossroads of a continent kept the town alive during repeated invasions. It was not until the Middle Ages, however, that Strasbourg emerged as a rich, independent city, maintaining its own army and minting its own coins.

During Strasbourg's four centuries as a Free City, craftsmen came from all over Europe to work on its magnificent cathedral (illustration, next page) of rose-red sandstone. From the roof may be seen the distant line of the Vosges Mountains stretching to the west. Beyond the Rhine extends the Black Forest, walling in the fertile valley on the east. Miles of corn fields frame the old city in waving green.

Many famous men are associated with Strasbourg. There Johann Gutenberg worked for 10 years on the development of printing from movable type. There Rouget de Lisle wrote the French national anthem, once called "The War Chant of the Army of the Rhine," later known as the "Marseillaise." In Strasbourg its latest title is still unrecognized.

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Seria and its neighbor, Duala Belait, have been modernized and expanded. Substantial new government buildings, homes, and shops have appeared on reclaimed land at the Brunei capital, long a settlement of thatched houses teetering on poles sunk in flooded mud flats.

But Brunei's oil wealth has not always been an unmixed blessing. During World War II it made the sultanate a highly strategic prize. Twice the Seria fields were fired in a "scorched earth" policy—first, in 1941, on the approach of the invading Japanese, and again by the Japanese in June, 1945, when Australian troops liberated the country.

NOTE: Brunei, on the island of Borneo, may be located on the Society's map of Asia and Adjacent Areas.

See also, in the *National Geographic Magazine* for September, 1945, "Keeping House in Borneo."

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AT THEIR DOMESTIC TASKS, DESCENDANTS OF DYAK HEADHUNTERS PRESENT A PEACEFUL SCENE

While the man of the family cooks over the open fire, two Dyak women sort feathers for their handicraft. Examples of their skill are the sun hats on the wall. These resemble warrior's shields, or parasols, but are none too large under Borneo's tropic sun. Of rattan covered with nipa-palm leaves, they are decorated with beads and shells. Clusters of metal disks hanging from the women's ears are earrings to vie with the "chandelier" earrings once popular with American women.

Bulletin No. 4, November 5, 1951

Under-Ocean Cable Lines Link the Nations

IN the cold war of intercontinental radio jamming, one path of instant communications between free nations stays open, protected by the ocean depths. This is the century-old submarine cable system, tying New and Old worlds together with thin copper-hearted strands, the nerve system of international trade and statesmanship.

The North Atlantic alone is crisscrossed by at least 19 such cable links. All told, cables underlie more than 400,000 miles of the world's oceans. But strange problems beset the operators of underwater cables and they often find themselves up to their necks in trouble.

Pirates, Anchors, and Worms

Most startling development in the cable world was the recent announcement that the only ocean-bottom link between the United States and Asia is going out of business. Unprofitable operations and costly repairs were cited. This line was laid at the turn of the century. It crosses the Pacific by way of Hawaii, Midway, Guam, and the Philippines. It includes the world's second-longest single span of cable—the 2,670-mile stretch between Midway and Guam.

Pirates, over-zealous fishermen, ships' anchors, and worms are some of the assorted hazards that keep cable owners in hot water. In the South China Sea, pirates recently cut three and a half miles of cable from the line between Hong Kong and Amoy. In 1946 pirates severed the cable between Hong Kong and Singapore. While a repair ship grappled for the broken ends, the thieves were merrily pulling the same cable up a few miles farther along. Unraveled and melted down, cable materials make top black-market items.

A French fisherman from Boulogne hauled up the first submarine cable across the English Channel the day after it was laid in August, 1850. Thinking it a tremendous eel, he clouted it vigorously with a hatchet. Not until he had 20 yards aboard did doubts arise; then he prudently cut off what he had and made for shore to show off his catch.

Sea-bottom Plows Bury Cables

Marine worms called teredos bore their way into cable insulation. Whales have been found choked to death in tangled line. Chemical action corrodes metallic wrappings. Cables may be crushed by icebergs, cut by trawlers, chafed by coral rock, snapped by undersea earthquakes, or buried in bottom slides.

One company has plowed several of its transatlantic cables into the ooze covering the continental shelves to minimize such hazards. A plow at the end of a mile-long chain was used, with the cable threaded through the plowshare.

Even "ghosts" sometimes haunt cables. Electricians at Valentia Island, Ireland, watching meters on the shore end of the lost Atlantic cable of 1865, recorded garbled signals coming in from the sea—messages from Davy Jones, some said. Actually, this was the first proof that

Politically, Strasbourg, with its surrounding Alsatian plains, became a bone of contention, energetically chewed over by France and Germany. Louis XIV made it part of France in 1681. Germany took the city back during the Franco-German War of 1870-71. Victory in World War I gave France control again. Hitler marched in—and out—in the 1940's.

Strasbourg suffered some bomb damage during World War II. The cathedral was hit several times, but the ruin is slight compared to some of the other Rhine cities.

Having it in mind to return to Strasbourg, the evacuating Germans did little harm to the ancient city. They carried away some machinery and movables but were careful not to cause any irreparable damage to what they hoped would shortly become their property again.

Strasbourg is not greatly changed. Ornate 19th-century architecture still dominates, though modern buildings have been erected to replace those shattered by the bombing, and the new green and white flag of the European Union waves over the council's new building in the northern outskirts of the city.

Today Strasbourg's more than 175,000 people are a blend of Gallic and Teutonic influences. Their speech is mainly German.

NOTE: Strasbourg appears on the Society's map of Western Europe.

For additional information, see "In Smiling Alsace, Where France Has Resumed Sway" (11 color photographs), in the *National Geographic Magazine* for August, 1927; and "Rediscovering the Rhine," July, 1925.

LIGNES AÉRIENNES LATÉCOÈRE

STRASBOURG'S CATHEDRAL, FOUR CENTURIES IN THE BUILDING, DOMINATES THE CITY

The carving on its towering façade is like the most delicate lacework. Its remarkable clock (inside) attracts sight-seers every day at noon when from its complicated works emerges a procession of apostles and angels. The timepiece marks not only the time of day, but the day, month, and year. In the narrow, crooked streets around the cathedral cluster old half-timbered houses, their sharp gables and overhanging stories reminiscent of the illustrations in a book of fairy tales.

Bulletin No. 5, November 5, 1951

Real Estate Bargains Awaited Early Settlers

SOARING real estate prices serve to remind Americans that the early bird gets the bargain. Peter Minuit's famous $24 purchase of Manhattan Island (illustration, next page) is only one example of the good "buys" available when the country was young.

Minuit's successor, Wouter Van Twiller, also got his money's worth when he gave a band of Indians about $1.65 worth of presents in exchange for 172-acre Governor's Island in New York Harbor. Near-by Staten Island, too, was bought from Indians in 1631 for "certain parcels of goods."

Pennsylvania Goes for $45,000

Christopher Columbus started it all with an investment in ships estimated by various authorities at from $16,000 to $75,000, of which Columbus himself is said to have contributed the equivalent of $2,000.

William Penn received in 1681 almost all of the present State of Pennsylvania as payment for a loan of 16,000 British pounds made by his father to King Charles II of England. At current exchange rates, this sum amounts to $44,800. In later years his descendants were paid eight times that much by the Commonwealth of Pennsylvania for their interests and were permitted to keep their private estates. Penn also was required to pay the king two beaver skins on January 1 each year, plus one-fifth of all gold and silver ore found within his territory.

For the Province of Maryland, Lord Baltimore delivered two Indian arrows yearly to Windsor Castle, plus a fifth of gold and silver.

Early transactions shifted ownership of the present State of New Jersey several times. Charles II originally granted the area to his brother, the Duke of York, who deeded it to John, Lord Berkeley and Sir George Carteret. In 1674 Berkeley sold West Jersey for 1,000 pounds ($2,800) to two Quakers named John Fenwick and Edward Byllings. The executors of Carteret's will sold East Jersey at public auction in 1683 to William Penn and a number of associates for 3,400 pounds ($9,520).

Half interest in the State of Maine, as represented by a royal grant to Sir Ferdinando Gorges, was bought from his heirs by the State of Massachusetts in 1677 for 1,250 pounds ($3,500).

Three Cents an Acre for Louisiana Purchase

When the United States bought Louisiana Territory from Napoleon in 1803, the country got a lot for its money. The price of $15,000,000 averaged out to less than three cents an acre for the 827,000 square miles. Subsequently, the federal government paid nearly a billion dollars to compensate Indian tribes for their lands in the territory.

Alaska's 375,000,000 acres (illustration, inside cover) cost less than two cents an acre, yet many Americans objected to the price. Although Russia was paid a total of $7,200,000 at the time of purchase, some historians claim that only $1,400,000 was payment for Alaska and $5,800,000 was payment for Russian naval maneuvers during the Civil War.

The federal government in its early years had difficulty selling its

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fluctuations in the earth's magnetic field occur even at the bottom of the oceans.

America's first underwater telegraph line was laid beneath New York Harbor in 1842 by Samuel F. B. Morse, who hoped to show the general public the versatility of his new invention. His thin strand of wire worked perfectly until a ship's anchor snagged it, and the sailors cut off a piece as a souvenir.

Transatlantic cable service was nurtured by a farsighted financier, Cyrus W. Field. Despite repeated accidents and failures between 1857 and 1865, a lasting cable was finally laid the year after the Civil War ended. It connected Heart's Content, Newfoundland, with Valentia Island, Ireland. Parts of that line are still in use.

Submarine cable is thin, usually less than an inch in diameter in deep water. It thickens to three or four inches near shore. Twenty miles or more of such line may be suspended in the sea while it is being laid, but once down, the cable hugs the ocean floor. Enough slack is left in newly laid cable to make sure that it will not hang festooned from submarine peaks and break of its own weight.

EDITH BAUER STROUT

REPAIR SHIP AND CREW AT ASCENSION ISLAND PATCH A BROKEN EUROPE-AFRICA CABLE

When a break occurs in an underwater cable, shore stations track down the point of trouble, usually to within half a mile. Great five-pronged grapples dropped from repair ships find the loose ends. Here an end is being floated to the island by large buoys and boats.

vast holdings of public land. Originally offered to the public at $1 an acre, the price was raised in 1796 to $2 an acre on easy terms. Sales were slow until 1820 when the price went down again to $1.25 an acre. The Homestead Act of 1862 made free land available and the boom was on.

NOTE: United States regions acquired by special purchase may be located on the Society's maps of The United States of America; and Canada, Alaska & Greenland.

For additional information, see "How the United States Grew," in the *National Geographic Magazine* for May, 1933; "Marking the Alaskan Boundary," July, 1909; and "Boundaries of Territorial Acquisitions," October, 1901. (These issues of the Magazine are out of print with the exception of July, 1909; refer to your library.)

HOWELL WALKER

PETER MINUIT GIVES $24 FOR MANHATTAN ISLAND—AN ALL-TIME RECORD IN REAL ESTATE DEALS. THIS COMMEMORATIVE FLAGPOLE STANDS IN THE BATTERY

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